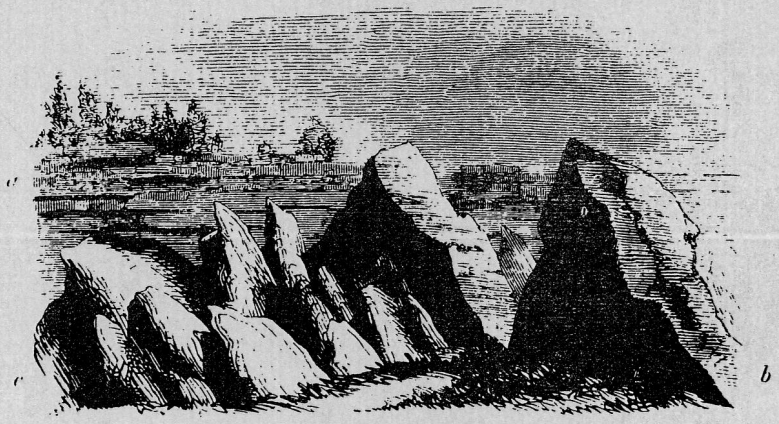
State of California
Department of Conservation

# MINING AND GEOLOGY BOARD

# ANNUAL REPORT

# 1983




LIMESTONE AND TRAP DYKE NEAR SONORA.

*a*. Superficial detritus. *b*. Trap dyke. *c*. Limestone.

State of California

# MINING AND GEOLOGY BOARD

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## STATE MINING AND GEOLOGY BOARD, ITS ORGANIZATION AND RESPONSIBILITIES

The State Mining and Geology Board is composed of nine members appointed by the Governor for four-year terms. By statute, the Board is comprised of individuals with specified professional backgrounds in geology, mining engineering, environmental protection, soil engineering, urban planning, landscape architecture, mineral resource conservation and seismology, and one public member.

Under the Surface Mining and Reclamation Act of 1975, the Mining and Geology Board establishes and maintains State policy for surface mining and reclamation practice as well as for the conservation and development of mineral resources. These policies guide local government in overseeing California's mining industry -- one of the largest and most diversified in the United States -- which in 1982 produced over $1.6 billion in mineral resources.

The Board represents the State's interest in federal mining matters, in the development and dissemination of geologic information, and in earthquakes and other geologic hazards. The Board also establishes general policy for the State's geologic survey, the Department of Conservation's Division of Mines and Geology. These responsibilities recognize the impacts that California's complex geology, large amounts of federally managed lands, high mineralization, and potential for geologic hazards have on the State's economy, land use, and public safety.

The Mining and Geology Board also establishes policy for the implementation of the Alquist-Priolo Special Studies Zones Act. Under this Act, hazardous fault zones are delineated by the State Geologist. This information is provided to local government to assure that structures for human occupancy are not built across such faults.

Under a recently enacted law (AB 101, Moore, Statutes of 1983), the Mining and Geology Board provides guidelines and priorities to aid the Department of Conservation and its Division of Mines and Geology in carrying out the Landslide Hazard Identification Program.

To enable the Board to meet its responsibilities, five permanent committees have been established. These include the Reclamation Committee, the Classification-Designation Committee, the Geohazards Committee, the Policy and Research Committee, and the Intergovernmental Relations Committee. The Board is also assisted by a four-person staff.

# ABSTRACT

The State Mining and Geology Board has broad policy responsibilities for earthscience, mineral resource conservation, mining, and geologic hazards under California's Surface Mining and Reclamation Act (SMARA). The Board also establishes policy that guides the implementation of the Alquist-Priolo Special Studies Zones Act, which addresses the hazards of ground rupture from active faulting. During the 1982-83 fiscal year, the Board took a number of actions in fulfilling these responsibilities.

The Board designated regionally significant sand and gravel deposits in the Orange County-Temescal Valley and San Gabriel Valley regions of the Los Angeles metropolitan area and initiated this process in the western San Diego County region.

Six mineral lands classification reports were reviewed and transmitted to affected lead agencies (Orange, Riverside, San Bernardino, Nevada, Calaveras, and Placer Counties) for their action pursuant to SMARA. These reports were initiated by petition asserting that the subject mineral deposits were being threatened by land uses which would prevent mining.

Classification of a 246 square mile area, covered by USGS Placerville 15' map sheet in the Sierra Nevada foothill area, was reviewed. This pilot study for the nonurban classification program delineated a number of areas of high mineral potential.

The Bay Area Conservation and Development Commission was designated by the Board as the lead agency for mining in the San Francisco Bay and Suisun Marsh. A dispute over which agency should be the lead agency for mining in the Bay initiated this action.

Regulations implementing SMARA and the APSSZA were reviewed and revised to comply with the Administrative Procedures Act. This Act requires that regulations must follow certain standards.

The Board also worked closely with the State Board of Education and its Curriculum Commission in the development of model graduation requirements for public schools, which includes geology and natural resources. These recommendations were approved by the Board of Education in June 1983.

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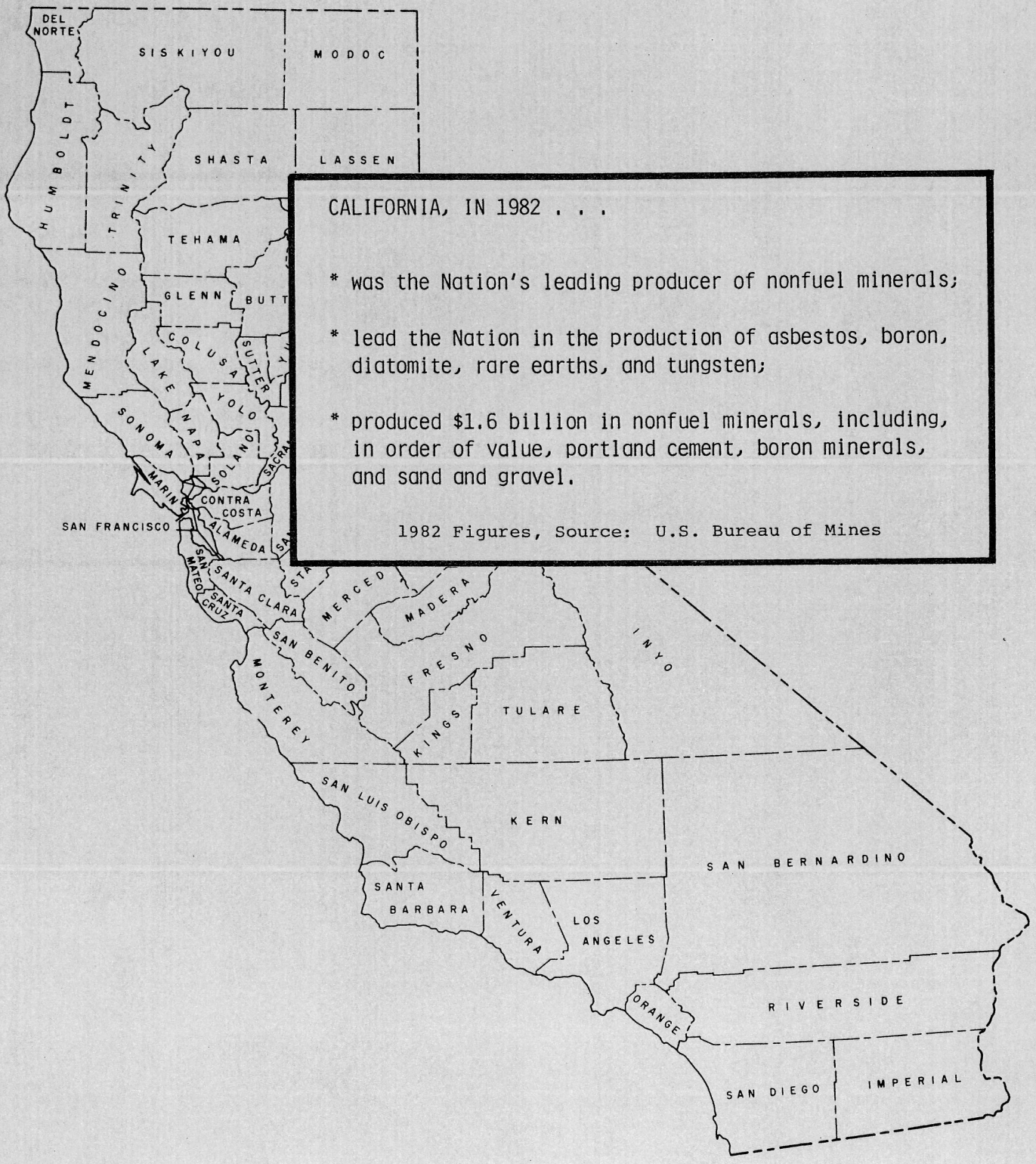



CALIFORNIA, IN 1982 . . .

* was the Nation's leading producer of nonfuel minerals;
* lead the Nation in the production of asbestos, boron, diatomite, rare earths, and tungsten;
* produced $1.6 billion in nonfuel minerals, including, in order of value, portland cement, boron minerals, and sand and gravel.

1982 Figures, Source: U.S. Bureau of Mines

# Part I.

# INTRODUCTION

This report highlights the Mining and Geology Board's activities during the 1982-83 fiscal year, particularly in implementing the Surface Mining and Reclamation Act of 1975 and the Alquist-Priolo Special Studies Zones Act of 1972.

Part II.

# MAJOR BOARD ACTIONS

## A. Mineral Resource Conservation

### 1. Introduction

The rapid growth of many California communities, particularly during the past two decades, and the resultant loss of mineral resources to urbanization emphasizes the continuing importance of the Surface Mining and Reclamation Act's (SMARA) mineral resource conservation program.

To maintain our existing community structure, as well as to provide for its continued growth, adequate supplies of a variety of mineral commodities used in the construction of buildings, roads, and other structures must be available at a reasonable cost. Yet, urban expansion itself has been a major cause of a decline in the availability of such mineral commodities. For example, in many areas, pressure from competing land uses has severely reduced or completely eliminated access to construction-quality sand and gravel, cement quality limestone, and clays used in building products. Other highly mineralized areas, such as the Sierra Nevada foothills, are being subjected to these same land-use pressures. The loss of these deposits has occurred because land-use planning decisions often have been made with little, if any, knowledge of the location and regional or statewide importance of these resources.

The continued availability of mineral resources that are critical to California's economy and the reclamation of mined lands are the interrelated objectives of SMARA. These objectives are achieved through land-use planning and regulatory programs administered by local government in cooperation with the State.

The Act's mineral resource conservation objective is achieved through a mineral inventory and economic assessment process termed "classification-designation." Information on the location of important mineral deposits is developed by the Department of Conservation's Division of Mines and Geology through the process of mineral land classification. This information is used by the Mining and Geology Board in designating those deposits that are of economic significance to a region, the State, or the nation. In turn, local government uses this information in developing mineral resource management policies and in making land-use decisions to ensure the conservation and development of these resources.

During the past year, the Board took a number of actions to achieve these objectives. Designation of regionally significant mineral deposits was completed in the Los Angeles and Orange County area, and initiated in San Diego County. In addition, reports classifying a number of threatened mineral deposits -- initiated in response to petitions -- were reviewed by the Board. These reports were transmitted to affected local agencies -- Orange, Riverside, San Bernardino, Nevada, Calaveras and Placer Counties -- for use in pending land-use decisions.

2. Designation of regionally significant mineral resources in urban areas of the State

a. Sand and gravel deposits in the Orange County-Temescal Valley and San Gabriel Valley regions designated

Twenty-two construction aggregate deposits in the Orange County-Temescal Valley and San Gabriel Valley regions were designated by the Mining and Geology Board as being of regional significance. These deposits constitute each region's aggregate resource base for the next 50 years. These actions followed a public hearing held in January 1983.

In taking this action, the Board relied upon reports by the Division of Mines and Geology, which identified sand and gravel deposits in these two regions. These reports further indicated which of the deposits were available -- free of structures and other incompatible land uses -- as future sources of construction aggregate. To understand the sufficiency of mineral reserves over the long term, the amount of aggregate in deposits covered by mining permits was compared with projected 50-year needs. It was found that in both regions, aggregate reserves were insufficient to meet long-term needs.

Specifically, the Orange County-Temescal Valley Production-Consumption (P-C) region requires an estimated 840 million tons of aggregate to satisfy its 50-year needs. Current permitted reserves, totaling 257 million tons, will be depleted in a little more than two decades at present consumption rates.

The San Gabriel Valley P-C region needs about 780 million tons of aggregate to meet its 50-year needs. Only 280 million tons of permitted aggregate reserves remain within this region, an amount that would be depleted within approximately 18 years based upon current consumption rates.

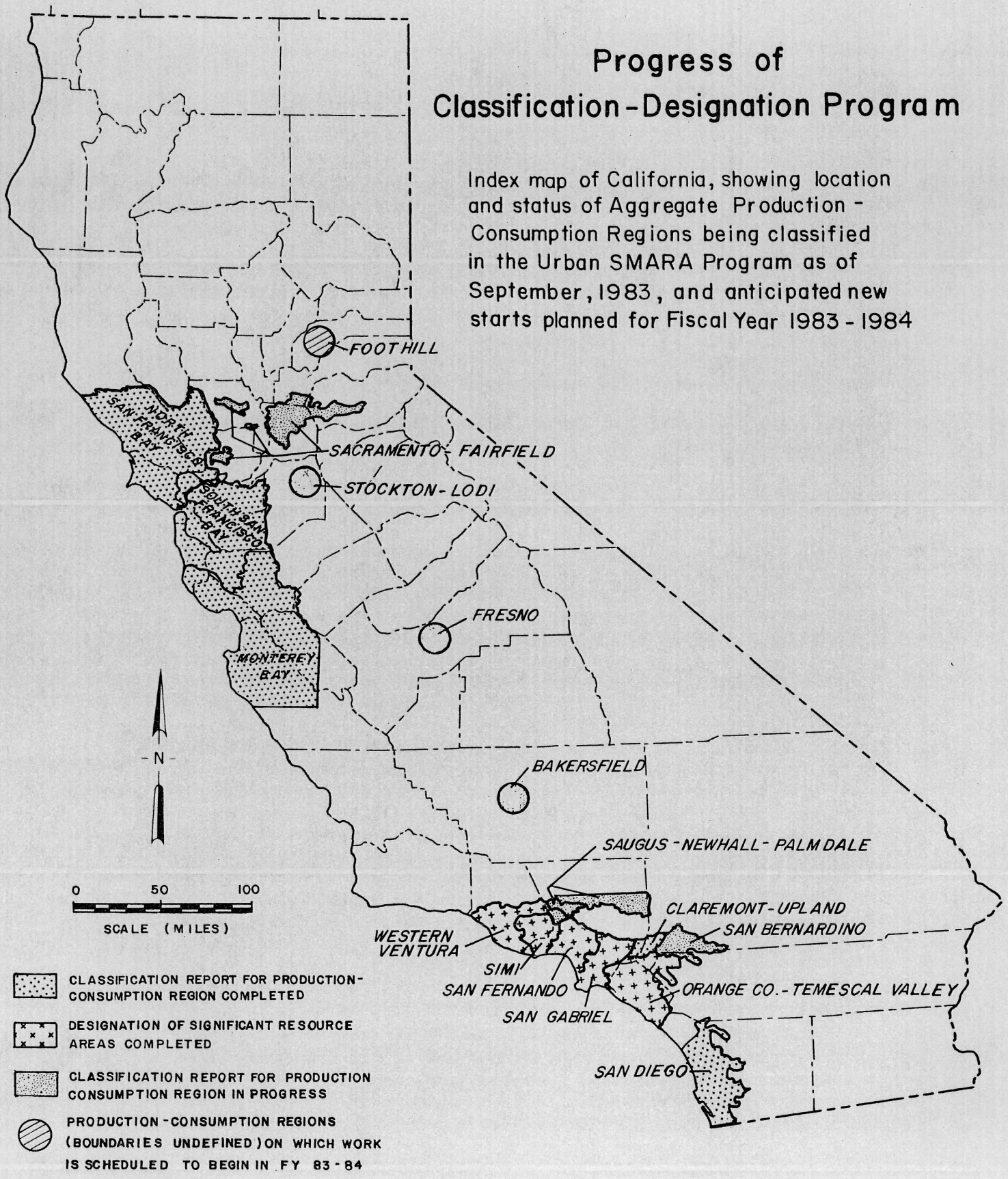
In selecting areas for designation within these two regions, the Board utilized information provided by an Environmental Impact Report (EIR), which described the environmental and land-use setting of these areas.

Based upon this information, the Division's classification reports, and public comment, the Board designated a number of areas of regional significance in April 1983. In the San Gabriel Valley Region, the Board designated areas containing an estimated 3,340 million tons of aggregate, which amounts to three times the 50-year demand. In the Orange County-Temescal Valley Region, 1,300 million tons of aggregate, or one and one-half times the region's 50-year need, were designated.

Regulations describing the location of these areas were adopted by the Board in June 1983, and subsequently submitted to the Office of Administrative Law for review and incorporation into the California Administrative Code.

# Progress of Classification-Designation Program

Index map of California, showing location and status of Aggregate Production - Consumption Regions being classified in the Urban SMARA Program as of September, 1983, and anticipated new starts planned for Fiscal Year 1983 - 1984



b. Designation of sand and gravel deposits in western San Diego County initiated

Identification of construction-quality aggregate (sand, gravel, and crushed rock) deposits that are currently available to meet the region's future needs is the focus of the designation process now underway in San Diego County.

To provide information on the aggregate resources of this area, a report, "Mineral Land Classification: Aggregate Materials in the Western San Diego County Production-Consumption Region," was prepared by the Division of Mines and Geology. A preliminary copy of this report was the topic of a July 1982 workshop hosted by the Mining and Geology Board. Following public comment, presentations by Department staff, and the Board's own review, the Board accepted this report with certain revisions and initiated the designation process for the region.

3. Classification of mineral resource areas in nonurban regions of the State

The initial focus of SMARA's classification-designation program was on metropolitan areas of the State. It was in these areas that the greatest conflict occurred between mining and urbanization. In its 1979 Annual Report to the Governor and Legislature, the Mining and Geology Board recommended that mineral lands in rural areas of California undergoing urbanization also needed to be addressed by SMARA's classification-designation process. In response to this and other recommendations regarding SMARA, Senate Bill 1300 (1980) was introduced by Senator Nejedly. The bill, which was subsequently signed into law, enabled the State to expand the range of areas that could be considered for mineral land classification and designation to include the entire State.

Following passage of SB 1300, the California Division of Mines and Geology began classifying land in rural areas of the State concurrently with its urban classification program. In developing target areas for this work, major geographic regions of the State were evaluated for their mineral importance and also for possible land-use conflicts that might preclude mineral development. Two regions, the Sierra Nevada foothills and the California Desert Conservation Area, were assigned the highest priority for classification by the State Mining and Geology Board. Both regions are well known for their great mineral wealth. Also, both regions are subject to land-use actions that could conflict with development of mineral resources important in meeting the needs of our society -- the Sierra Nevada foothills because of urbanization and the California Desert Conservation Area because of pending federal land management decisions.

The Placerville Map Sheet (USGS 15-minute quadrangle), -- in the Sierra Nevada foothills -- was selected as a pilot project under this new program.

a. Placerville Classification Report

This report was submitted to the Board for review in March 1982. The area investigated covers 246 square-miles in the Sierra Nevada foothill

region. It traverses a highly mineralized area -- the Sierra Nevada Foothills Mineralized Belt (gold, copper, chromium) -- and is subject to urbanization.

To ensure that the mineral information presented in the pilot report is in a form usable by local government, the Mining and Geology Board solicited comments from affected lead agencies -- El Dorado County, Amador County, and the City of Placerville. Comments were also solicited by the Division of Mines and Geology from mining industry representatives, regarding the report's geologic content.

Since the Placerville project was the first to address metallic and industrial mineral resources over broad areas of the state -- earlier projects have dealt with construction materials and individual deposits -- the Board asked the State Geologist to review the guidelines used in such classifications in light of his experience with this project. The State Geologist's recommendations were incorporated into revised guidelines, "Interim Guidelines for Classifying Mineral Resources in Non-Urban Areas," which are discussed later in more detail.

Following approval by the Board, the State Geologist revised the Placerville report to conform with these guidelines. It is expected that the revised Placerville report will be submitted to the Board in the Fall of 1983 for approval and transmittal to affected lead agencies pursuant to SMARA.

4. Classification reports for petitioned deposits accepted and transmitted to affected lead agencies

Mineral deposits threatened by incompatible land uses which may prevent mining may be brought to the Board's attention by petition. To qualify for a petition, a deposit must meet a certain size threshold for significance and be faced with an imminent land use threat.

Classification reports for six petitioned deposits were accepted by the Board and transmitted to affected lead agencies.

Upon receipt of these reports by the lead agency, certain statutorily mandated actions are required. SMARA requires that an affected lead agency, within 12 months of receiving a mineral lands classification, shall establish mineral resource management policies in its general plan that will: (1) recognize the mineral lands classification information; and (2) emphasize the conservation and development of identified mineral resources.

The intent of these actions is to ensure that mineral resources are considered in land-use planning and decision making that may affect them.

a. Riverside Cement Company's Platz kaolinitic sandstone deposit, Orange County

Urbanization in the vicinity of a kaolinitic sandstone deposit in Trabuco Canyon (Orange County) was the basis of the Board's acceptance of a petition for classifying this deposit. The sandstone from this deposit,

called the Platz deposit, is used as a component in the manufacture of white cement.

A classification report for this deposit, prepared by the Division of Mines and Geology, was accepted by the Board and transmitted to Orange County in November 1982.

b. Pluess-Staufer, Inc., limestone deposit, San Bernardino County

In response to a request by the Mining and Geology Board, the State Geologist classified the Pluess-Staufer, Inc., limestone deposit in the Lucerne Valley of San Bernardino County as being significant (MRZ-2). This action followed acceptance by the Board in March 1982 of a petition submitted by Pluess-Staufer, Inc. A proposed subdivision adjacent to the deposit's haul road threatened future mining of this deposit.

Limestone produced at the Pluess-Staufer deposit is of high purity and is used in a variety of products -- paints and rubber fillers, components in drywall, textured ceilings, and as an extender in plastics.

A report classifying this deposit as significant was accepted by the Board at its November 1982 meeting and subsequently transmitted to San Bernardino County.

c. Placer Service Corporation's placer gold deposit on San Juan Ridge, Nevada County

A classification report covering a major placer gold deposit located on San Juan Ridge was accepted by the Board and transmitted to Nevada County in January 1983.

Classification of the San Juan Ridge gold deposit as MRZ-2 was initiated as a result of a petition by the Placer Service Corporation. The threat in this case stemmed from "unsanctioned land-use activities" (increased dwelling densities, building construction, and lot splits) in the surrounding area that could conflict with proposed mining of the deposit.

d. Edward Ordway's Skunk Gulch limestone and dolomite deposit, Calaveras County

A petition requesting classification of a threatened carbonate (limestone and dolomite) deposit located in Calaveras County was accepted by the Board in late 1981. Land acquisition along the Stanislaus River, including portions of this deposit, by the U.S. Corps of Engineers for limited access camping facilities threatened the continued availability of the deposit for mining.

A report by the Division of Mines and Geology classifying this deposit as containing a significant quantity of high grade carbonate rock was accepted by the Board and transmitted to Calaveras County and the U.S. Corps of Engineers in January 1983.

e. Pacific Clay Products, Inc., Thomas Mine clay deposit, Riverside County

A report classifying clay deposits at the Thomas Mine in Riverside County was formally accepted by the Board and transmitted to the County in February 1983.

The clay from this deposit is an important ingredient in the manufacture of sewer pipe and roofing tile. The land-use threat cited in a petition submitted by Pacific Clay Products was the continuing residential development along the property's northern and eastern boundaries.

f. Joe Chevreaux Company construction and specialty aggregate deposits, Nevada and Placer Counties

A report classifying the Joe Chevreaux Company's construction and specialty aggregate deposits located in and adjacent to Lake Combie on the Bear River was accepted by the Board in June 1983, and later transmitted to Placer and Nevada County planning agencies. The Chevreaux properties include both hardrock and alluvial type aggregate deposits.

Because of overall quality, hardness, particle shape, and other physical and chemical characteristics, the two Chevreaux deposits produce a number of aggregate products -- including construction aggregate, specialty sands, filter media, asphaltic aggregate, and riprap. Some of the specialty products, for example the filter media, are of such high unit value they can be marketed over a large portion of the western United States.

The land-use threat in this case was a potential subdivision of land adjacent to the deposit, which was incompatible with mining.

5. Interim guidelines for classification of mineral resources in nonurban areas of California developed

Guidelines adopted by the Board in June 1978 provide direction to the State Geologist for classifying mineral lands in California. These guidelines have been successfully applied to certain mineral deposits, such as construction materials or other actively mined deposits, where the deposit's geometry can be reasonably inferred and its economic viability established.

However, classification of mineral deposits, where the deposits' geometry is more difficult to delineate -- metallic and industrial mineral commodities -- requires a different approach. Such an approach, which by necessity must be generic in nature, concentrates on identifying geologic settings and evidence of the presence of various types of mineral deposits rather than on locating and measuring individual deposits. Attempting to locate and measure individual mineral deposits, whether by drilling, geophysical, or other sampling and testing methods is clearly beyond the scope, authority, or funding of the State's classification program.

Based on the Division's experience with the Placerville quadrangle classification, the Board asked the State Geologist to develop guidelines to be used for classification of nonurban mineral lands for metallic and industrial minerals. These guidelines were accepted by the Board in June 1983 on an interim basis.

The guidelines utilize the McKelvey diagram -- a mineral deposit classification scheme developed by USGS to catalog mineral deposits based upon the relationship between the degree of knowledge and value of minerals present (size and grade) -- adapted to apply to the classification of land under SMARA.

6. Designation of the lead agency for implementing the Surface Mining and Reclamation Act in the San Francisco Bay and in the Suisun Marsh

The application of SMARA to dredging projects in the San Francisco Bay in general, and in particular questions of jurisdiction -- which public agency should serve as the lead agency -- has been of increasing concern in recent years.

A permit and reclamation plan, approved by the lead agency, is required by SMARA prior to initiating a mining operation. Mining operations employing dredging technology are also subject to these requirements.

During the past several years, a number of dredging projects in the San Francisco Bay have involved questions of SMARA's application. Many of these questions raised issues of jurisdiction -- which local agency should serve as the lead agency. Resolution of jurisdictional questions in such cases delays projects and does not benefit the public in terms of increased environmental protection or hazard mitigation.

Cities and counties are normally considered to be lead agencies for implementing SMARA. However, a particular mining project in San Francisco Bay or Suisun Marsh may involve more than one local agency. For example, a proposed oyster shell dredging project in South San Francisco Bay involved four local agencies -- two cities and two counties. In addition, a regional agency, the San Francisco Bay Conservation and Development Commission (BCDC), was also involved. This situation required a further determination as to which agency should be the lead agency. SMARA provides that in cases of dispute, the Board shall determine the lead agency. However, many local agencies are neither prepared to assume a lead agency role -- not having a certified SMARA ordinance -- nor desire to assume the role.

The San Francisco Bay Conservation and Development Commission has broad land-use planning and permitting responsibilities in the San Francisco Bay and in the Suisun Marsh. It has traditionally regulated dredging and mining in these areas. The authority to carry out these responsibilities stem from the McAteer-Petris Act, the Suisun Marsh Preservation Act, and the Commission's implementing regulations.

Rather than continue to resolve jurisdictional questions on a case-by-case basis in the San Francisco Bay, the State Mining and Geology Board, in early 1983, designated the San Francisco Bay Conservation and Development Commission as the lead agency for regulation of mining pursuant to SMARA

within the Commission's jurisdiction. This includes the San Francisco Bay and Suisun Marsh, excepting the Suisun Marsh secondary management area, which is under Solano County's jurisdiction.

To allow BCDC to serve as a SMARA lead agency, the Mining and Geology Board further certified the Commission's existing statutory authority and regulations as complying with the minimum requirements of SMARA.

In taking these actions, the Board also felt that it will be necessary to review the implementation of this decision after two years to assess its effectiveness.

B. Mined Lands Reclamation

1. Introduction

The reclamation of mined lands is an integral part of SMARA's overall mineral resource conservation objectives.

Reclamation, under SMARA, is a cooperative planning process that involves the mine operator, local government, and the State. Reclamation plans developed by the operator are reviewed and approved by local government in accordance with their ordinances and general plans. These ordinances and plans reflect local conditions as well as State policies on mined land reclamation and mineral resource conservation. This stresses a cooperative rather than an adversarial approach.

2. Local SMARA ordinances reviewed and certified

Prior to becoming effective, local ordinances, which regulate mining, are reviewed and certified by the Mining and Geology Board. This process ensures that these ordinances conform to SMARA and the State's policy for surface mining and reclamation practice.

In situations where a lead agency -- one with active mining operations -- does not have a certified ordinance, SMARA specifies that the Mining and Geology Board shall review and approve reclamation plans for mining operations within that agency's jurisdiction. The operator must still obtain a permit from the local agency. The Act requires that both a permit and an approved reclamation plan be obtained prior to mining.

Currently, there are 88 lead agencies for SMARA in the State. To date, the Board has certified ordinances from 83 of these agencies. These agencies include all of the State's 58 counties -- except San Francisco County, which has no mining, thus is not considered to be a lead agency, -- 25 cities and BCDC -- the lead agency for mining in the San Francisco Bay and Suisun Marsh. The Board continues to work with the remaining five lead agencies without certified ordinances to achieve compliance.

3. Regulations implementing SMARA reviewed for conformance with the Administrative Procedures Act

The State's policy for surface mining and reclamation practice, which is established by regulation, was reviewed by the Office of Administrative Law

(OAL) in early 1983. This review is required by the Administrative Procedures Act, which was recently enacted to ensure, in part, that existing regulations conform to certain standards. These standards include: necessity, authority, clarity, consistency, reference, and nonduplication.

Following its review, OAL identified a number of areas within these regulations that did not comply with these standards. An "Order to Show Cause" as to why the identified sections should not be repealed was issued in February 1983.

In response, the Mining and Geology Board initiated a review of these regulations.

A draft was subsequently developed that amended and reorganized these regulations to comply with the Order to Show Cause, the Administrative Procedures Act, and to preserve existing policy. Selected individuals representing the mining industry, local and State government, and environmental protection groups were asked to review this draft. A workshop to discuss this draft was scheduled for September 1983 with a public hearing on a final version anticipated in early 1984.

## C. Geohazards

### 1. Legislation addressing the identification of landslide hazards (AB 101, Moore) supported

The problems of unstable slope hazards (landslides, mudslides, debris flows, slumps, soil creep, etc.) occur throughout much of California, and are underscored by the tragic loss of life and property due to storm-triggered slides over the past few years.

The development of lands subject to such hazards without advanced and full knowledge of the potential for the hazard is a major contributor to such losses. The Board has long advocated the need to identify areas that have potential for slope instability ahead of urbanization for consideration in advanced land-use planning and decision making by local government.

The Board has worked closely with the Department of Conservation, its Division of Mines and Geology, and the Legislature in seeking ways to address this problem. Legislation introduced early in the 1982-83 legislative session by Assemblywoman Gwen Moore -- AB 101 -- is a direct result of this work.

AB 101 was signed into law on September 21, 1983: Chapter 997, Statutes of 1983.

This bill formally recognizes the slope instability hazard mapping responsibilities of the Department of Conservation's Division of Mines and Geology, and specifically provides a conceptual framework for a mapping program to identify potential landslide hazards in urbanizing areas. Information developed by this program would be provided to local government for use in planning and decision making that affect development. Under this bill, the Mining and Geology Board establishes priorities and policy to guide the program.

2. Preliminary maps of new and revised Special Studies Zones (Alquist-Priolo Special Studies Zones Act) showing recent ground rupture from active faults reviewed

Preliminary maps showing areas subject to ground rupture from faulting (special studies zones) were reviewed by the Board. These maps, prepared by the Division of Mines and Geology, identify active fault zones, which are subject to the requirements of the Alquist-Priolo Special Studies Zones Act (APSSZA). This Act prohibits the construction of structures for human occupancy across the trace of an active fault.

These maps, which are listed below, were sent to affected local agencies as well as concerned State agencies by the State Geologist on January 1, 1983. A public forum to receive such comments was provided by the Board in February 1983.

1. Trinidad
2. Arcata North
3. Arcata South
4. Korbel
5. Hydesville
6. Laytonville
7. Longvale
8. Willits NW
9. Willits SE
10. Redwood Valley
11. Purdys Gardens
12. Hopland
13. Kelseyville
14. Clearlake Highlands
*15. Asti
16. Jericho Valley
17. Knoxville
*18. Geyserville
*19. Jimtown
*20. Mount St. Helena
*21. Healdsburg
*22. Mark West Springs
*23. Santa Rosa
*24. Cotati
*25. Glen Ellen
26. Mt. George
*27. Petaluma River
*28. Sears Point
29. Cuttings Wharf
*30. Cordelia

*Revised zone map

Following a 90-day review period, these maps become official and are sent to affected local jurisdictions. Local agencies affected by the proposed new or revised Special Studies Zones included the cities of Arcata, Fairfield, Santa Rosa, and Trinidad, and the counties of Humboldt, Lake, Mendocino, Napa, Solano, Sonoma, and Yolo.

3. Regulations implementing the Alquist-Priolo Special Studies Zones Act reviewed for compliance with the Administrative Procedures Act

Regulations of the Mining and Geology Board, which guide the State and local government in implementing the Alquist-Priolo Special Studies Zones Act (APSSZA), were reviewed in late 1982 by the Office of Administrative Law (OAL). The objective of this review was to assure that these regulations conform to the standards of the Administrative Procedures Act (APA). In December 1982, OAL issued a "14-day letter" outlining its general concerns as to whether or not certain portions of these regulations meet APA standards.

In response, the Board reviewed its APSSZA regulations and proposed revisions to bring them into conformance with the APA, and to preserve existing policy. This proposal was reviewed by the Seismic Safety

Commission, which in the past has worked closely with the Board in developing and amending these regulations. Representatives of governmental agencies and the general public interested in seismic safety were invited to review the proposed changes in a June 1983 workshop. This workshop preceded a public hearing scheduled for September 1983.

D. Public Education

1. Geologic curriculum in public schools

California's propensity for geologic hazards such as earthquakes, landslides, and volcanism, combined with society's continuing need for mineral resources and concern for environmental protection, requires a public understanding of geology. This may not be the case, due to the absence of geologic curriculum in the primary and secondary levels of the State's public schools.

Recognizing this problem, the Board, in coordination with the State Board of Education and its Curriculum Commission, outlined the content of a year's study of California's physical resources and geologic hazards. These efforts were supported by earth science teachers, mining industry representatives, and local government (counties of Monterey and Sacramento).

In June 1983, the Board of Education approved the Mining and Geology Board's recommendations as part of the Model Graduation Requirements for high school. These requirements have been sent to all school districts in the State for implementation.

The Mining and Geology Board feels that this increased emphasis on geological education will ultimately result in the wiser use of California's natural endowment and a more healthy respect for its geological hazards.

The Mining and Geology Board intends to continue working with the Board of Education in the development of the Science Framework Addendum and Environmental Education Program.